



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBE8814164002
Job Sheet 170781



Part No: RBE8814164002

Job Qty: 1 ea

Part Name: Special Wrench



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/19/18

Job Tracking No:

Due Date: 1/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBE8814164002 REV:1 IPP REV A 18.01.18 NEW ISSUE RQ VERIFIED BY DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		1/30/18	0.00	0.00	Start Up Large Fab-3		<i>BC</i>
95	Large Fab	1 pcs		1/31/18	0.00	0.25	Large Fab 3		<i>BC</i>
100	QC	1 pcs		1/31/18	0.00	0.00	QC5		<i>EL</i>
110	QC	1 pcs		1/31/18	0.00	0.00	QC9		<i>EL</i>
115	HandFinish	1 pcs		1/31/18	0.00	0.00	HandFinish7		
120	Outsource	1 pcs		1/31/18	0.00	0.00	Outsource12		<i>AT 18/02/18</i>
125	Packaging	1 pcs		1/31/18	0.00	0.00	Packaging2		<i>AT 03/03</i>
126	QC	1 pcs		1/31/18	0.00	0.00	QC6		<i>38</i>
130	Packaging	1 pcs		1/31/18	0.00	0.00	Packaging3-2		<i>GA</i>
500	QC21-FG	1 Ea		1/31/18	0.00	0.00	QC21		<i>21</i>

Part Op 95 - WELD AS PER DWG

Descriptions: 120 - -Issue P/O to Groupe Altech; PO 039039 -Black oxide finish, MIL-C-13924C Class 1 -Certificate of

Conformity is required

120 - Identifed Stock



S040807



Special Wrench

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA

TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

inner

resse.marie

PART NO: RBE8814164002

Original Serial #: S040807

Revision:

Operation: Start up Operation 02/09/18

Change No:

Job No: 170781

QA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



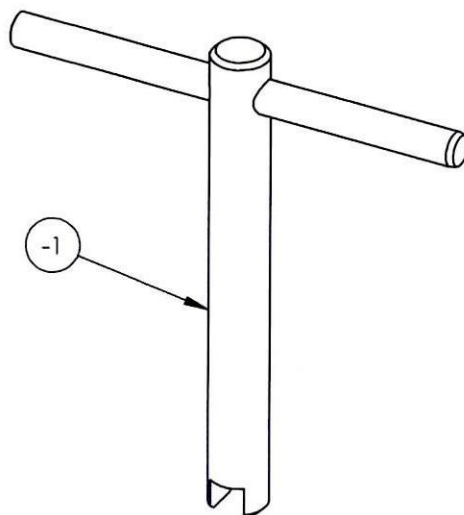
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :	Step #:	QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				Completed By	
						Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____							

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REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
1		RELEASED FOR PRODUCTION.			8/15/2016	DPD JAG



SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 17078 L M J

1801-19

NOTE:
REF. EUROCOPTER T/N: 8814164002.

DART AEROSPACE	
TITLE SPECIAL WRENCH	
DWG NO. RBE8814164002	REV 1
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145
SCALE 1:1	DATE 7/21/2016
SHEET 1 OF 3	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
	X		-1	1	WRENCH WELDMENT			2
	1		-3		WRENCH SHAFT	4140/4142		3
	1	B/O	-5		DOWEL PIN	STEEL	M5 X 70mm (MCMASTER-CARR #91595A399)	2
	ASSY -1							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

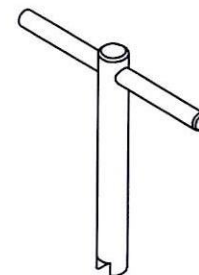
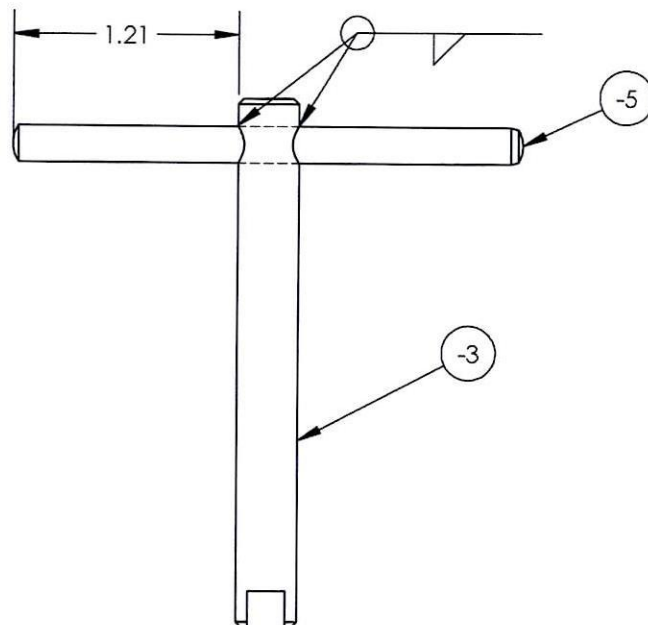
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



(-1)
WRENCH WELDMENT

DART AEROSPACE	
TITLE SPECIAL WRENCH	
DWG NO. RBE8814164002-1	REV 1
MAT'L QMSI-6.2.2 REV D	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
FINISH BLACK OXIDE	.XX ± .01 ANGLES ± 5°
SPEC QMSI-6.2.2 REV D	.X ± .1 SURFACES = 125/
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145
SCALE 1:1	DATE 7/21/2016
SHEET 2 OF 3	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO039039

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6	170435	RBT400325	Socket Tail Boom Nut -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/27/18	6 pcs ✓	0 pcs 6x	6 pcs AT	\$1.35/pcs 8/13/05	\$8.10
7	170781	RBE8814164002	Special Wrench -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/27/18	1 pcs ✓	0 pcs 1x	1 pcs AT	\$1.95/pcs 18/03/05	\$1.95
8	171171	RBE350A93- 3307-00-01	Retractor -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13964, CLASS 1; MIL-C-16173 GRADE 4 -Certificate of Conformity is required	Firmed	2/27/18	6 pcs ✓	0 pcs 6x	6 pcs AT	\$2.55/pcs 18/03/05	\$15.30
Grand Total:										\$263.45

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit
www.dartaerospace.com for further explanation.


CL
ab



Certificat de Conformité / Certificate of Compliance

(006931-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

006931 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
27-Feb-2018		Aman Kaur			PO039039			
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	646.3911 Rev.	646.3911 CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	32	32	0	0	0
2	RBE350A93-3312-03-5 Rev.	RBE350A93-3312-03-5 01 -OXIDE BLACK [OXIDE BLACK]	BLACK-OXIDE CH	6	6	0	0	0
3	RBE350A93-3312-03-7 Rev.	RBE350A93-3312-03-7 01 -OXIDE BLACK [OXIDE BLACK]	BLACK-OXIDE CH	6	6	0	0	0
4	RBE350A94-2704-00-1 Rev.	RBE350A94-2704-00-1 01 -OXIDE BLACK [OXIDE BLACK]	BLACK-OXIDE CH	20	20	0	0	0
5	RBE350A93-3312-03-3 Rev.	RBE350A93-3312-03-3 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK CH	6	6	0	0	0
6	RBT400325 Rev.	RBT400325 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK CH	6	6	0	0	0
7	RBE8814164002 Rev.	RBE8814164002 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK CH	1	1	0	0	0
8	RBE350A93-3307-00-01 Rev.	RBE350A93-3307-00-01 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK CH	6	6	0	0	0

DAS
38
9-89

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.